

REMARKS

Upon entry of the amendments in this paper, claims 6 and 8-11 will be pending in the above-identified application. Claims 6 and 11 are herein amended. No new matter is entered. It is respectfully submitted that this paper is fully responsive to the Office action mailed on November 4, 2009.

Claim Rejections – 35 U.S.C. §103

Claims 6, 9/6 and 10/6 are rejected under 35 U.S.C. §103(a) as being unpatentable over *Ohira* (U.S. Patent Application Publication No. 2002/0112711) in view of *Kelly et al.* (U.S. Patent No. 5,623,912).

Claims 8, 9/8 and 10/8 are rejected under 35 U.S.C. §103(a) as being unpatentable over *Ohira* in view of *Kelly*, and in further view of *Ono* (U.S. Patent No. 6,032,649).

Claims 11/6 and 11/8 are rejected under 35 U.S.C. §103(a) as being unpatentable over *Ohira* in view of *Kelly*, and *Ono*, and in further view of *Haimerl et al.* (U.S. Patent Application Publication No. 2002/0167419).

As acknowledged by the Examiner, *Ohira* does not disclose “said ignition control means instructs electric supply to an ignition coil in accordance with said reference pulse signal before the instruction of the spark discharge of said ignition plug in the period until said crank shaft is rotated once after the cranking of said internal combustion engine is started.”

However, the Examiner asserts “*Kelly* discloses (col. 12, 29-45) an ignition system wherein ignition control means instructs electric supply to an ignition coil in accordance with a reference pulse signal before an instruction of a spark discharge of an ignition plug.”

In *Kelly* (col. 12, 29-45), it is disclosed that an ECU 50 controls spark timing (current limiting) of each spark plug 40 and electric supply timing of each ignition coil 20 based on crankshaft position and other factors.

However, *Kelly* does not teach or suggest detecting a one rotation period from when cranking of an internal combustion engine is started to when the crankshaft has completed one rotation. Further, *Kelly* does not teach or suggest a pulse signal corresponding to the “reference pulse signal” in claim 1 of the present application.

In *Ohira*, a spark plug 37 in an ignition device 35 sparks at a fixed time 5 degrees before and after TDC in response to every pulse of the G2 signal by a controller circuit (step 114) in a period until the crankshaft is rotated once after cranking of the internal combustion engine is started.

However, *Ohira* does not disclose positively detecting such period.

Therefore, *Ohira* and *Kelly* do not disclose “said ignition control means detects, in accordance with said crank angle pulse signal and said reference pulse signal, a one rotation period from when cranking of said internal combustion engine is started to when said crank shaft has completed one rotation” and “instructs electric supply to an ignition coil in accordance with said reference pulse signal before the instruction of the spark discharge of said ignition plug in the one rotation period,” as recited in claim 1.

Application No. 10/564,956
Art Unit: 3747

Amendment under 37 C.F.R. §1.111
Attorney Docket No. 053547

In view of the aforementioned amendments and accompanying remarks, Applicants submit that the claims, as herein amended, are in condition for allowance. Applicants request such action at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,
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